
AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of claims:

1. (CURRENTLY AMENDED) A method for forming a photoresist pattern on a prescribed film, said photoresist pattern having a multi-level profile formed from exposure to light transmitted through a reticle having a multi-level profile, the method comprising the steps of:

a) providing a reticle; the reticle comprises one or more films overlying a reticle substrate to partially transmit and shift the phase of incident light, said reticle is comprised of the reticle substrate, a partially transmitting phase shift film, and an opaque film;

the reticle substrate passing essentially all incident light, and

the partially transmitting phase shift film transmitting approximately between 20% to 70% of incident light and shifting the phase about 180 degrees in transmission through the partially transmitting phase shift film, and

the ~~an~~ opaque film overlying sections of the partially transmitting phase shift film, the opaque film blocking light so that essentially all incident light is attenuated;

b) ~~a)~~ exposing a light sensitive photoresist film, having a predetermined thickness, to light transmitted through the reticle for a predetermined amount of time, with light being transmitted through the reticle substrate exposing a first photoresist area of said light sensitive photoresist film to a first dosage,

with light being transmitted through the partially transmitting phase shift film exposing a second photoresist area of said light sensitive photoresist film to a second intermediate dosage, and

with light being transmitted through the ~~remaining~~ opaque film exposing a third photoresist area of said light sensitive photoresist film to a third dosage;

said light sensitive photoresist film is comprised of a lower photoresist layer and an upper photoresist layer; said lower photoresist layer is less or more sensitive to light than said upper photoresist layer;

and

c) ~~b)~~ developing the light sensitive photoresist film exposed in step (b) ~~(a)~~ to form a photoresist profile having an opening in the first photoresist area,

the photoresist profile having the ~~photoresist~~ predetermined thickness in the third photoresist area, and the photoresist profile having an intermediate thickness, between the predetermined thickness and zero, in the second photoresist area.

2. (CANCELED)

3. (CURRENTLY AMENDED) The method of claim 1 wherein said lower photoresist layer is less sensitive to light than said upper photoresist layer by between about 5 and 10%.

4. (CURRENTLY AMENDED) The method of claim 1 wherein: said lower photoresist layer is less sensitive to light than said upper photoresist layer in a case where the upper and lower photoresist layers are positive type; or

said lower photoresist layer is more sensitive to light than said upper photoresist layer in a case where the upper and lower photoresist layers are negative type.

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5. (CURRENTLY AMENDED) The method of claim 1, which further includes: etching in a single step, said light sensitive photoresist film and a dielectric layer under said light sensitive photoresist film to form a dual damascene shaped opening in said dielectric layer; and

said light sensitive photoresist film and said dielectric layer have about the same etch rate.

6. (CURRENTLY AMENDED) A method of forming a photoresist film profile over a substrate using a reticle,

the method comprising the following steps:

providing a reticle; said reticle ~~having a multi-level profile~~ comprising,

(1) a transparent substrate,

(2) a partially transmitting 180 degree phase shift film overlying predetermined areas of the transparent substrate to transmit approximately 20 to 70% of incident light, and

(3) an opaque film overlying ~~the~~ predetermined areas of the partially transmitting 180 degree phase shift film[[,]] ;

[[a)]] depositing a photoresist film having a predetermined thickness over a dielectric layer over a ~~the~~ substrate; said photoresist film is comprised of a lower photoresist layer and an upper photoresist layer; said lower photoresist layer is less sensitive to light than said upper photoresist layer;

[[b)]] in a one step exposure, directing light to the photoresist film through the reticle, the reticle transmitting a first intensity of light through the transparent substrate to create a first exposure pattern,

the reticle transmitting a second intensity, less than the first intensity, of light through the partially transmitting 180 degree phase shift film to create a second exposure pattern, and

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the reticle transmitting a third intensity of light, blocking about all incident light, through the opaque film to create a third exposure pattern; and

[[c)]] developing the photoresist film to remove a first thickness of photoresist film, approximately equal to the predetermined thickness, in areas of the first exposure pattern, and

to remove a second, intermediate thickness of the photoresist film, less than the first thickness, in the areas of the second exposure pattern, whereby ~~the~~ a photoresist profile includes areas of the photoresist film having a plurality of different thicknesses.

7. (CANCELED)

8. (CURRENTLY AMENDED) The method of claim 6 wherein the ~~sensitivity~~ sensitivities of the lower photoresist layer and the upper photoresist layer are ~~is~~ adjusted so that:

* the first intensity of light through the transparent substrate sensitizes both the lower and upper photoresist layers; and

* the second intensity of light through the transparent substrate sensitizes only the upper photoresist layer; and

* the third intensity of light through the opaque film does not sensitize the lower or the upper photoresist layer.

9. (CURRENTLY AMENDED) The method of claim 6 wherein ~~said photoresist film is comprised of a lower photoresist layer and an upper photoresist layer;~~ said lower photoresist layer is less sensitive to light than said upper photoresist layer by between about 5 and 10%.

10. (CURRENTLY AMENDED) The method of claim 6 which further includes: ~~said photoresist film is comprised of a lower photoresist layer and an upper photoresist layer; said lower photoresist layer is less sensitive to light than said~~

~~upper photoresist layer;~~ said lower photoresist layer is less sensitive to light than said upper photoresist layer by between about 5 and 10%; and

transferring said first and second exposure patterns ~~pattern~~ in said photoresist film by an etch into ~~the surface of~~ said dielectric layer ~~substrate~~ in a single etch step; the etch rate of said photoresist film and said dielectric layer are about equal.

11. (CANCELED)
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18. (CANCELED)
19. (CANCELED)
20. (CANCELED)

21. (CURRENTLY AMENDED) The method of claim 1 which further includes; ~~said light sensitive photoresist film is comprised of a lower photoresist layer and an upper photoresist layer;~~

etching in a single step, said light sensitive photoresist film and a dielectric layer under said light sensitive photoresist film to form a dual damascene shaped opening in said dielectric layer; and

said lower photoresist layer, said upper photoresist layer and said dielectric layer have about the same etch rate.